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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/799,308

03/13/2004

Daniel E. Cooney

11960

7830

7590

08/10/2005

Gregory Garmon
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EXAMINER

DAVIS, OCTAVIA L

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

4A

Office Action Summary	Application No.		Applicant(s)	
	10/799,308		COONEY, DANIEL E.	
	Examiner		Art Unit	
	Octavia Davis		2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/13/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/13/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6 – 11 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Vincent et al.

Regarding claims 1 and 6, Vincent et al disclose a self-contained pressure sensitive record system comprising a material (paper) having a surface, an indicator coating having an impact-sensitive component that produces a visible change when subjected to a mechanical impact, applying the coat to the surface of the material (See Col. 4, lines 1 –13) and subjecting the material to a load and inspecting the material having the indicator paint thereon for the presence of the visible change (See Col. 6, lines 18 – 28).

Regarding claim 7, the coat includes a first reactant, and a second reactant, wherein the first reactant and the second reactant are separated by a barrier coating solution, which is ruptured when the indicator paint is subjected to the impact (See Col. 4, lines 46 – 54).

Regarding claim 8, the first reactant and the second reactant react together to produce the visible change upon the impact (See Col. 4, lines 25 – 42).

Regarding claims 9 and 10, the coating is a light absorbing material that includes a dye (See Col. 4, lines 6 – 13 and 33 – 36).

Regarding claim 11, the material is accurately monitored during a series of tests (See Col. 6, lines 34 – 66 and Col. 7, lines 1 – 54).

Regarding claim 20, the coat comprises a plurality of microcapsules, each microcapsule comprises the reactants and a matrix comprising a coat binder (See Col. 4, lines 1 – 54).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 21 – 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamura et al.

Regarding claim 21, Yamamura et al disclose a fiber reinforced ceramic composite material comprising means for setting a first design standard for a ceramic material having an indicator coating applied thereto (See Col. 4, lines 58 – 68, Col. 5, lines 21 – 40 and Col. 6, lines 52 – 53), wherein the indicator coating has an impact-sensitive component that produces a visible change when subjected to a mechanical impact and setting a second design standard for the ceramic material which does not have the indicator paint applied thereto (See Col. 6, lines 52 – 64).

Regarding claims 22 and 23, setting the first design standard with a unity damage-tolerance factor K_{IC} and wherein the step of setting the second design standard includes the step of setting the second design standard with a damage-tolerance factor greater than unity and greater than the first damage tolerance factor (See Col. 6, lines 51 – 68 and Col. 7, lines 1 – 36).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 – 5 and 12 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent et al in view of Yamamura et al.

Regarding claims 2 – 5 and 12 - 19, Vincent et al disclose all of the limitations of these claims except for teachings that design limits are determined for the composite, low ductility, polymer-matrix and ceramic material when the material has or does not have the paint applied thereto and the material having a tensile elongation to failure factor of less than about 2 percent. However, Yamamura et al disclose a fiber-reinforced ceramic composite material comprising steps for determining a design criteria for the ceramic composite material including analyzing various properties of the material to achieve a desired composite material (See Col. 6, lines 52 – 64 and Cols. 11 and 12, Table 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vincent et al according to the teachings of Yamamura et al for the purpose of, providing a ceramic composite material with a critical stress factor to achieve a great improvement in the inherent brittleness and non-uniformity in the mechanical strength of ceramics and a composite material that is suitable for used as a structure material (See Yamamura et al, Col. 7, lines 26 – 36).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rider (6,668,661) discloses a pressure distribution image analysis process.

Pechersky (5,920,017) discloses a thermal input control and enhancement for lased based residual stress measurements using liquid temperature indicating coatings.

Ogisu et al (6,655,218) disclose a composite material and method of controlling damage thereto and damage sensor.

Campbell et al (6,528,190) disclose fiber-coating compounds for reinforced ceramic matrix composites.

Miller et al (5,876,266) disclose a polishing pad with controlled release of desired microencapsulated polishing agents.

Zamot (5,593,772) discloses a structure constructed to reduce the impact of visual imperfections.

Maalouf (Re 30,116) discloses carbonless manifold business forms.

Chang (6,162,485) discloses a fingerprinting system and method.

8. Any inquiry concerning this communication should be directed to examiner Octavia Davis at telephone number (571) 272 - 2176. The examiner can normally be reached on Maxiflex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (571) 272 - 2180. The fax phone number for the organization where this application where this application or proceeding is assigned is (703) 872 - 9306.

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